

📖 CHAPTER 51: WATER

Section

General Provisions

[51.01](#) Opening water meter box

Drought Contingency Plan

[51.10](#) Policy; purpose; intent

[51.11](#) Public education

[51.12](#) Coordination with regional water planning groups

[51.13](#) Authorization

[51.14](#) Application

[51.15](#) Definitions

[51.16](#) Triggering criteria for initiation and termination of drought response stages

[51.17](#) Drought response stages

[51.18](#) Enforcement

[51.19](#) Variances

Backflow Prevention

[51.30](#) Customer service inspection

[51.31](#) Backflow assembly testing and installation

Water Conservation Plan

[51.40](#) Definition; objective

[51.41](#) Goals

[51.42](#) Methods

[51.43](#) Statute

[51.44](#) Public information and education

[51.45](#) Universal metering and record management

[51.46](#) Meter testing, repair and replacement

[51.47](#) Leak detection, repair, and minimization of conveyance losses

[51.48](#) Rate structure

[51.49](#) Low-flow plumbing fixtures

[51.50](#) Water-conserving landscaping

[51.51](#) Additional conservation strategies

[51.52](#) Wholesale water contracts

[51.53](#) Implementation, enforcement, coordination with the Regional Water Planning Group; updating of the Plan

[51.99](#) Penalty

[Appendix A](#): Discussion of water conservation goals

[Appendix B: Utility data sheet](#)

[Appendix B-1: Definitions of commonly used terms](#)

Cross-reference:

Adoption of Plumbing Code and amendments, additions and deletions, see § [150.03](#)

GENERAL PROVISIONS

§ 51.01 OPENING WATER METER BOX.

It shall be unlawful for any person other than a duly authorized city employee to open a city water meter box, such city water meter box being the closed box which houses the meter measuring the water to each city water user and consumer.

(⁷⁵ Code, § 19-1) (Ord. 1996-13, passed 5-7-96; Am. Ord. 1998-11, passed 5-5-98; Am. Ord. 2008-02, passed 2-5-08) Penalty, see § [51.99](#)

DROUGHT CONTINGENCY PLAN

§ 51.10 POLICY; PURPOSE; INTENT.

(A) In order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation and fire protection and to protect and preserve public health, welfare and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the city hereby adopts the following regulations and restrictions on the delivery and consumption of water.

(B) Water uses regulated or prohibited under this Drought Contingency Plan (the Plan) are considered to be nonessential and continuation of such uses during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in § [51.99](#) of this chapter.

(Ord. 1999-8, passed 5-4-99; Am. Ord. 1999-19, passed 7-6-99; Am. Ord. 2000-8, passed 4-18-2000; Am. Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.11 PUBLIC EDUCATION.

The city will periodically provide the public with information about the Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided by means of press releases, radio announcements, cable television public announcement channels and utility bill notices.

(Ord. 1999-8, passed 5-4-99; Am. Ord. 1999-19, passed 7-6-99; Am. Ord. 2000-8, passed 4-18-2000; Am. Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.12 COORDINATION WITH REGIONAL WATER PLANNING GROUPS.

The service area of the city is located within the Brazos Region G Planning Group, and the city has provided a copy of this Plan to the Brazos Region G Regional Planning Group.

(Ord. 1999-8, passed 5-4-99; Am. Ord. 1999-19, passed 7-6-99; Am. Ord. 2000-8, passed 4-18-2000; Am. Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.13 AUTHORIZATION.

The Mayor, or his/her designee, is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety and welfare. The Mayor, or his/her designee, shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

(Ord. 1999-8, passed 5-4-99; Am. Ord. 1999-19, passed 7-6-99; Am. Ord. 2000-8, passed 4-18-2000; Am. Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.14 APPLICATION.

The provisions of this Plan shall apply to all persons, customers and property utilizing water provided by city. The terms “person” and “customer” as used in the Plan include individuals, corporations, partnerships, associations and all other legal entities.

(Ord. 1999-8, passed 5-4-99; Am. Ord. 1999-19, passed 7-6-99; Am. Ord. 2000-8, passed 4-18-2000; Am. Ord. 2003-21, passed 8-26-03 ; Am. Ord. 2008-02, passed 2-5-08)

§ 51.15 DEFINITIONS.

For the purpose of this subchapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

AESTHETIC WATER USE. Water use for ornamental or decorative purposes such as fountains, reflecting pools and water gardens.

COMMERCIAL AND INSTITUTIONAL WATER USE. Water use which is integral to the operations of commercial and nonprofit establishments and governmental entities such as retail establishments, hotels and motels, restaurants and office buildings.

CONSERVATION. Those practices, techniques and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water or increase the recycling and reuse of water so that a supply is conserved and made available for future or alternative uses.

CUSTOMER. Any person, company or organization using water supplied by city.

DOMESTIC WATER USE. Water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation or for cleaning a residence, business, industry or institution.

INDUSTRIAL WATER USE. The use of water in processes designed to convert materials of lower value into forms having greater usability and value.

LANDSCAPE IRRIGATION USE. Water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, athletic fields, parks and rights-of-way and medians.

NONESSENTIAL WATER USE. Water uses that are not essential nor required for the protection of public health, safety and welfare, including the following:

(1) Irrigation of landscape areas, including parks, athletic fields and golf courses, except otherwise provided under this Plan;

(2) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;

(3) Use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts or other hard-surfaced areas;

- (4) Use of water to wash down buildings or structures for purposes other than immediate fire protection;
 - (5) Flushing gutters or permitting water to run or accumulate in any gutter or street;
 - (6) Use of water to fill, refill or add to any indoor or outdoor swimming pools or jacuzzi-type pools;
 - (7) Use of water in an outside fountain or pond for aesthetic or scenic purposes, except where necessary to support aquatic life;
 - (8) Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); or
 - (9) Use of water from hydrants for construction purposes or any other purposes other than fire fighting.
- (Ord. 1999-8, passed 5-4-99; Am. Ord. 1999-19, passed 7-6-99; Am. Ord. 2000-8, passed 4-18-2000; Am. Ord. 2003-21, passed 8-26-03 ; Am. Ord. 2008-02, passed 2-5-08)

§ 51.16 TRIGGERING CRITERIA FOR INITIATION AND TERMINATION OF DROUGHT RESPONSE STAGES.

(A) The Mayor, or his/her designee, shall monitor water supply and/or demand conditions on a daily basis and shall determine when conditions warrant initiation or termination of each stage of the Plan. Public notification of the initiation or termination of drought response stages shall be by means of publication in local newspaper, notice on water bills, announcements on radio stations and cable television public announcement channels.

(B) The triggering criteria described below are based on water supply conditions during past droughts.

(1) Stage 1 - Mild Water Shortage Conditions.

(a) *Requirements for initiation.* At the second City Council meeting of April each year, the Mayor shall evaluate the weather conditions and if necessary initiate Stage One-Mild Water Shortage conditions beginning May 1 and that stage will continue until it is rescinded or until other stages become necessary. However, if weather conditions change and water demand dictates, the Mayor can initiate Stage 1 at any time.

(b) *Requirements for termination.* Stage 1 of the Plan may be rescinded by the Mayor.

(2) Stage 2 - Moderate Water Shortage Conditions.

(a) *Requirements for initiation.* Customers shall be required to comply with the requirements and restrictions on nonessential water uses for Stage 2 of this Plan when total daily water demand equals or exceeds four million gallons per day for five consecutive days or 4.8 million gallons per day on any single day.

(b) *Requirements for termination.* Stage 2 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of ten consecutive days. Upon termination of Stage 2, Stage 1 becomes operative.

(3) Stage 3 - Severe Water Shortage Conditions.

(a) *Requirements for initiation.* Customers shall be required to comply with the requirements and restrictions on nonessential water uses for Stage 3 of this Plan when total daily water demand equals or exceeds four million gallons per day for five consecutive days or 4.8 million gallons on a single day and/or continually falling treated water reservoir levels which do not refill overnight.

(b) *Requirements for termination.* Stage 3 of the Plan may be rescinded when weather conditions have changed and all of the conditions listed as triggering events have ceased to exist for a period of ten consecutive days. Upon termination of Stage 3, Stage 2 becomes operative.

(4) *Stage 4 - Emergency Water Shortage Conditions.*

(a) *Requirements for initiation.* Customers shall be required to comply with the requirements and restrictions for Stage 4 of this Plan when the Mayor, or his/her designee, determines that a water supply emergency exists based on:

1. Major water line breaks or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or
2. Natural or man-made contamination of the water supply source.

(b) *Requirements for termination.* Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of seven consecutive days.

(Ord. 1999-8, passed 5-4-99; Am. Ord. 1999-19, passed 7-6-99; Am. Ord. 2000-8, passed 4-18-2000; Am. Ord. 2003-21, passed 8-26-03 ; Am. Ord. 2008-02, passed 2-5-08)

 **§ 51.17 DROUGHT RESPONSE STAGES.**

The Mayor, or his/her designee, shall monitor water supply and/or demand conditions on a daily basis and, in accordance with the triggering criteria set forth in § 51.16, shall determine that a mild, moderate, severe or emergency condition exists and shall implement the following actions upon publication of notice in a newspaper of general circulation.

(A) *Stage 1 - Mild Water Shortage Conditions.*

- (1) *Goal.* Reduce daily water demand to less than four million gallons per day.
- (2) *Supply management measures.* The city will discontinue flushing of fire hydrants and water mains (except as necessary in repair of broken water lines) and will only irrigate landscape areas on designated watering days.
- (3) *Water use restrictions.* Under threat of penalty for violation, the following water use restrictions shall apply to all persons.
 - (a) Customers are requested to voluntarily conserve water and limit irrigation of landscaped areas to two days per week. The days of the week are left up to the customers.
 - (b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited, except on designated watering days. Such washing, when allowed, shall be done with a hand-held bucket or a hand held hose equipped with a positive shutoff nozzle for quick rinses. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.
 - (c) Use of water to fill, refill or add to any indoor or outdoor swimming pools, wading pools or jacuzzi-type pools is prohibited except on designated watering days.
 - (d) Operation of any outside ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

(e) Use of water from hydrants shall be limited to firefighting, related activities or other activities necessary to maintain public health, safety and welfare, except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from city.

(f) Use of water for the irrigation of golf course greens, tees and fairways and athletic fields is allowed on designated watering days. However, if the golf courses or athletic fields utilize a water source other than that provided by city, the facility shall not be subject to these regulations.

(g) The following uses of water are prohibited:

1. Wash down of any sidewalks, walkways, driveways, parking lots, tennis courts or other hard-surfaced areas;
2. Use of water to wash down buildings or structures for purposes other than immediate fire protection;
3. Use of water for dust control;
4. Flushing street gutters or permitting water to run or accumulate in any street gutter or street or parking lot;
5. Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
6. The serving of water by restaurants or other businesses without the request of the customer.

(B) *Stage 2 - Moderate Water Shortage Conditions.*

(1) *Goal.* Reduce daily water demand to less than four million gallons per day.

(2) *Supply management measures.* The city will discontinue flushing of fire hydrants and water mains (except as necessary in repair of broken water lines) and reduce irrigation of public landscaped areas to once every seven days.

(3) *Water use restrictions.* All requirements of Stage 1 shall remain in effect during Stage 2 except the following:

(a) Irrigation of landscaped areas shall be allowed on all days of the week during the hours of 6:00 a.m. to 9:00 a.m. and 6:00 p.m. to 9:00 p.m., except the days of Monday and Thursday. No irrigation of landscaped areas shall be allowed on Mondays or Thursdays;

(b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except on designated watering days between the hours of 6:00 a.m. to 9:00 a.m. and 6:00 p.m. to 9:00 p.m. Such washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rinses. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables;

(c) Use of water to fill, refill or add to any indoor or outdoor swimming pools, wading pools or jacuzzi-type pools is prohibited except on designated watering days between the hours of 6:00 a.m. to 9:00 a.m. and 6:00 p.m. to 9:00 p.m.;

(d) Operation of any outside ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system;

(e) Use of water from hydrants shall be limited to firefighting, related activities or other activities necessary to maintain public health, safety and welfare; except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from city;

(f) Use of water for the irrigation of golf course greens, tees and fairways, and athletic fields, is allowed on designated watering days. However, if the golf course or athletic fields utilize a water source other than that provided by city, the facility shall not be subject to these regulations; and

(g) The following uses of water are defined as nonessential and are prohibited:

1. Wash down of any sidewalks, walkways, driveways, parking lots, tennis courts or other hard-surfaced areas;
2. Use of water to wash down buildings or structures for purposes other than immediate fire protection;
3. Use of water for dust control;
4. Flushing gutters or permitting water to run or accumulate in any gutter or street;
5. Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
6. The serving of water by restaurants or other businesses without the request of the customer.

(C) Stage 3 - Severe Water Shortage Conditions.

(1) *Goal.* Reduce daily water demand to less than four million gallons per day.

(2) *Supply management measures.* The city will discontinue flushing of fire hydrants and water mains (except as necessary in repair of broken water lines) and irrigation of landscape areas will be limited to once every ten days. Use of water for Fire Department practices will be discontinued.

(3) *Water use restrictions.* All requirements of Stages 1 and 2 shall remain in effect during Stage 3 except:

(a) Irrigation of landscaped areas shall be limited to designated watering days between the hours of 6:00 a.m. and 9:00 a.m. and between 6:00 p.m. and 9:00 p.m. and shall be by means of hand-held hoses, hand-held buckets, drip irrigation. The use of permanently installed automatic sprinkler systems and hose-end sprinklers is prohibited at all times. The use of any other method is prohibited at all times.

(b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle not occurring on the premises of a commercial car wash and commercial service stations and not in the immediate interest of public health, safety and welfare is prohibited. Further, such vehicle washing at commercial car washes and commercial service stations shall occur only between the hours of 6:00 a.m. and 9:00 a.m. and between 6:00 p.m. and 9:00 p.m.

(c) The filling, refilling or adding of water to swimming pools, wading pools and jacuzzi- type pools is prohibited.

(d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

(e) No applications for new, additional, expanded or increased-in-size water service connections, meters, service lines, pipeline extensions, mains or water service facilities of any kind shall be allowed or approved.

(D) Stage 4 - Emergency Water Shortage Conditions.

(1) *Goal.* Achieve a 50% reduction in daily water demand.

(2) *Supply management measures.* The city will discontinue flushing of fire hydrants and water mains (except as necessary in repair of broken water lines) and all other nonessential water uses, including water for Fire Department practices.

(3) *Water use restrictions.* All requirements of Stages 1, 2 and 3 shall remain in effect during Stage 4 except:

(a) Irrigation of landscaped areas is absolutely prohibited; and

(b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is absolutely prohibited.

(Ord. 1999-8, passed 5-4-99; Am. Ord. 1999-19, passed 7-6-99; Am. Ord. 2000-8, passed 4-18-2000; Am. Ord. 2003-21, passed 8-26-03 ; Am. Ord. 2008-02, passed 2-5-08) Penalty, see § [51.99](#)

§ 51.18 ENFORCEMENT.

(A) No person shall knowingly or intentionally allow the use of water from city for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by the Mayor, or his/her designee, in accordance with provisions of this Plan.

(B) Any person who violates this Plan is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not less than \$10 and not more than \$500. Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person is convicted of three or more distinct violations of this Plan, the Mayor shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of a reconnection charge and any other costs incurred by the city in discontinuing service. In addition, suitable assurance must be given to the city that the same action shall not be repeated while this Plan is in effect. Compliance with this plan may also be sought through injunctive relief in the district court.

(C) Any person, including a person classified as a water customer of the city, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation.

(Ord. 2000-8, passed 4-18-2000; Am. Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.19 VARIANCES.

(A) The Mayor, or his/her designee, may, in writing, grant temporary variance for existing water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation or fire protection for the public or the person requesting such variance and if one or more of the following conditions are met:

(1) Compliance with this Plan cannot be technically accomplished during the duration of the water supply shortage or other condition for which the Plan is in effect; or

(2) Alternative methods can be implemented which will achieve the same level of reduction in water use.

(B) Persons requesting an exemption from the provisions of this subchapter shall file a petition for variance with the city within five days after the Plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the Mayor, or his/her designee, and shall include the following:

- (1) Name and address of the petitioner(s);
- (2) Purpose of water use;
- (3) Specific provision(s) of the Plan from which the petitioner is requesting relief;
- (4) Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this subchapter;
- (5) Description of the relief requested;
- (6) Period of time for which the variance is sought;
- (7) Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date; and
- (8) Other pertinent information.

(C) Variances granted by the city shall be subject to the following conditions, unless waived or modified by the Mayor or his/her designee:

- (1) Variances granted shall include a timetable for compliance; and
- (2) Variances granted shall expire when the Plan is no longer in effect, unless the petitioner has failed to meet specified requirements.

(D) No variance shall be retroactive or otherwise justify any violation of this Plan occurring prior to the issuance of the variance.

(Ord. 1999-8, passed 5-4-99; Am. Ord. 1999-19, passed 7-6-99; Am. Ord. 2000-8, passed 4-18-2000; Am. Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

BACKFLOW PREVENTION

§ 51.30 CUSTOMER SERVICE INSPECTION.

A customer service inspection certification as required by the Texas Commission on Environmental Quality (TCEQ), 30 Texas Administrative Code, Chapter 290, § 290.46, shall be completed prior to providing continuous water service to new construction or any existing service when the city has reason to believe that cross-connections or other unacceptable plumbing practices exist; or after any material improvement, correction, or addition to the private plumbing facilities. The existence of a serious threat to the integrity of the public water supply shall be considered sufficient grounds for immediate termination of water service.

(Ord. 1999-30, passed 10-5-99; Am. Ord. 2008-02, passed 2-5-08)

§ 51.31 BACKFLOW ASSEMBLY TESTING AND INSTALLATION.

(A) All backflow prevention assemblies shall be tested upon installation by a recognized backflow assembly tester and certified to be operating within specifications. Backflow prevention assemblies which are installed to provide protection against high health hazards must also be tested and certified to be operating within specifications at least annually by a recognized backflow prevention device tester.

Backflow assembly testing and installation shall be completed as required by the Texas Commission on Environmental Quality (TCEQ), 30 Texas Administrative Code, Chapter 290, § 290.44h.

(B) It shall be the duty of the customer at any premise where backflow prevention assemblies are installed to have a certified inspection and operational tests conducted annually. In those instances where the city deems the hazard to be deleterious to human health, customer service inspection certifications may be required semiannually. Inspections and tests shall be at this expense of the customer or customer representative and shall be performed by a certified backflow technician.

(C) Assemblies shall be repaired, overhauled, or replaced at the expense of the customer whenever said assemblies are found to be defective. Records of such tests, repairs, and overhaul shall be kept and submitted to the city within five days of the test, repairs or overhaul of each backflow prevention assembly.

(D) No device or assembly shall be removed from use, relocated, or other device or assembly substituted without the approval of the city. Whenever the existing assembly is moved from the present location, requires more than minimum maintenance, or when the city finds that the maintenance constitutes a hazard to health, the unit shall be replaced by a backflow prevention assembly complying with requirements of this section and the current adopted Plumbing Code of the city.

(E) A test report must be completed by the recognized backflow prevention assembly tester for each assembly tested. The signed and dated original must be submitted to the city, Community Development Division, within five days of test.

(F) A recognized backflow prevention assembly tester must have completed a Texas Commission on Environmental Quality (TCEQ) approved course on cross connection control and backflow prevention and pass an examination administered by the TCEQ or its designated agent.

(Ord. 1999-30, passed 10-5-99; Am. Ord. 2008-02, passed 2-5-08)

WATER CONSERVATION PLAN

§ 51.40 DEFINITION; OBJECTIVE.

(A) *Definition.* In the Tex. Water Code, **WATER CONSERVATION** is defined as follows:

(1) The development of water resources; and

(2) Those practices, techniques, and technologies that will reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses.

(B) *Objective.* Based upon these concepts of water conservation, Stephenville's objective is to develop a Water Conservation Plan that increases water use efficiency, thereby reducing water demands, without adversely affecting population and the economic growth potential of its customers.

(Tex. Water Code § 17.001(23)(A), (B)) (Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.41 GOALS.

(A) The objective of Stephenville's Water Conservation Plan is to promote and publicize water conservation methods that will enable Stephenville to meet its goal of reducing the 2009-2013 five-year average annual municipal per capita water use of 104 gallons per person per day (gpcd) by approximately 1.5%, or 1.56 gpcd to 102.4 gpcpd by 2019 and by 3% to 100.9 gpcd by 2024. See Appendix A attached to the approving ordinance for a discussion of how this goal was determined. This municipal per capita water

use statistic includes water used within the home for drinking, toilet flushing, bathing, food preparation, dishwashing, laundry, cleaning, and outdoor uses at home, including landscape irrigation, car washing, and outside cleaning. In addition to the water used at homes, the municipal per capita water use statistic includes a person's share of water used in the workplace for toilet flushing, drinking, cleaning, and lawn irrigation of commercial properties. Outside the home uses also include the water used in commercial establishments such as restaurants, laundries, and car washes. Institutional water use, such as water used in schools, churches, recreation centers, and water used by cities for fire protection, sanitation, and public recreation, is also included in the municipal per capita water use statistic. However, the municipal per capita water use statistic does not include use of any water for industrial purposes. The annual per capita water use statistic includes the municipal per capita water use as well as the water used for industrial purposes.

(B) Stephenville plans to accomplish its water conservation goal through the water conservation methods listed and described in this Plan.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08; Am. Ord.2014-09, passed 4-1-14)

§ 51.42 METHODS.

Stephenville's Water Conservation Plan includes the following water conservation methods, which are described in the sections that follow:

- (A) Statute;
- (B) Public Information and Education;
- (C) Universal Metering and Record Management;
- (D) Meter Testing, Repair, and Replacement;
- (E) Leak Detection, Repair, and Minimization of Conveyance Losses;
- (F) Rate Structure;
- (G) Low-Flow Plumbing Fixtures;
- (H) Water-Conserving Landscaping Education;
- (I) Additional Water Conservation Strategies;
- (J) Wholesale Water Contracts;
- (K) Implementation, Enforcement, Coordination with the Regional Water Planning Group (RWPG); and
- (L) Updating of the Plan.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.43 STATUTE.

(A) Because landscape watering is believed to be responsible for up to 50% of summer water usage, the reduction of lawn and garden watering will help control peak demands, extend the city's water supplies, maximize the use of existing treatment and capacity systems and reduce the potential for summer watering restrictions. Therefore, it shall be unlawful for any person, firm, corporation, business or other entity other than establishments primarily engaged in (1) growing nursery products, nursery stock, shrubbery, bulbs,

fruit stock, sod, and similar vegetation, under cover or in open fields and/or (2) growing short rotation woody trees with a growth and harvest cycle of 10 years or less for pulp or tree stock as defined by the North American Industry Classification System, at any time of the year to:

(1) Operate an automated in-ground irrigation system on any day of the week between 11:00 a.m. and 6:00 p.m. Landscape watering is permitted any time with a hand-held hose, soaker hose, bucket, watering can, bubbler or drip irrigation system. A spray type irrigation system may be used any time for the purposes of cooling golf course tee or putting surfaces with run cycles of less than five minutes.

(2) Wash any motor vehicle at any location other than a commercial car wash, car dealership, detail shop or automotive shop unless the hose is equipped with a positive shutoff nozzle. Such nozzle shall stop the flow of water through the hose when released by the operator.

(3) Install a new irrigation system unless designed by a licensed professional recognized by the state to design water conserving irrigation systems. Each new system shall utilize zonal irrigation, drip irrigation, subsurface irrigation or other water conserving features as appropriate. When application for the irrigation permit is requested by other than a licensed irrigation specialist or landscape architect, the irrigation system plans shall be made available to city building officials.

(B) A waiver of the above division may be granted for the irrigation of new landscaping plants whereby watering would be permitted to maintain adequate growth until plants are established, but not to exceed a 30-day time period. Waivers for other activities may be granted on a case-by-case basis. Waivers will not be available when criteria triggering a drought response have been or are initiated. Any person desiring a waiver must make application to the city Public Works Department and pay a \$50 nonrefundable fee. The applicant must agree to pay a water rate that is three times the current rate for all consumption over 12 CCF (1 CCF=748 gallons, therefore 12 CCF=8,976 gallons) as registered by residential meters and for all consumption as registered by water only meters or commercial meters. Persons desiring a waiver for new landscapes shall exclusively utilize water-use-efficient trees, shrubs, ground covers, ornamental plants and turf; and are to utilize water wise horticultural practices, including proper soil preparation and the use of mulch, compost and zonal irrigation systems. Helpful information regarding plants and practices may be found on links from the city web pages.

(Ord. 2008-02, passed 2-5-08; Am. Ord. 2009-08, passed 4-7-09)

§ 51.44 PUBLIC INFORMATION AND EDUCATION.

(A) Stephenville's program of public information and education will be expanded to inform water users of the importance of water conservation, and will provide information to water users as to how this can be accomplished in the home, at work, and in public places where individuals use water. Public information and education can work in two ways to accomplish water conservation.

(1) One way is to inform water users of how to manage and operate existing and new fixtures and appliances so that less water is used.

(a) The procedures to be used include:

1. Pamphlets on water conservation issued to new water customers;
2. Toilet leak detection kits issued to new water customers;
3. Announcements concerning water conservation on the city's news channel;
4. Printed water conservation tips on monthly water bills throughout the year;

5. Additional water conservation information posted on the city web page as well as links to:

A. Texas Smartscape; www.txsmartscape.com;

B. Texas Water Development Board (TWDB); www.twdb.state.tx.us;

C. Texas Commission on Environmental Quality (TCEQ); www.tceq.state.tx.us;

6. City of Stephenville Water Conservation Committee Optimist Park Water Wise Garden.

(b) The public information will include ideas and practices such as:

1. Washing full loads of clothes and dishes;

2. Using a bucket of water instead of a flowing hose to wash cars and windows;

3. Turning the water off while brushing teeth or washing hands; and

4. Watering lawns, gardens, and shrubs during evening (as opposed to daytime) hours.

(2) The second way public information and education can work to conserve water is to inform and convince water users to:

(a) Obtain and use water-efficient plumbing fixtures and appliances;

(b) Adopt low water-use landscaping plans and plants;

(c) Find and repair leaks; and

(d) Take advantage of water conservation incentives where available.

(B) Stephenville will use the resources of the Texas Water Development Board (TWDB), the American Water Works Association, and the American Public Works Association to assist in obtaining publications and materials for the public education program. Individual pamphlets and flyers provided from these entities will be selected for specialized water-conservation needs as they arise.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.45 UNIVERSAL METERING AND RECORD MANAGEMENT.

(A) The city employs metering devices on all source water diversions. The meters are capable of measuring the amount of water diverted/pumped to within plus or minus 5%. In addition, the city currently meters all water supply connections, using meters that are capable of measuring accurately within plus or minus 5%. In addition, a regularly scheduled maintenance program of meter repair and replacement will be performed in accordance with the following schedule:

(1) Production (master) meters will be tested annually;

(2) Meters larger than one inch will be tested annually; and

(3) Meters one inch or smaller will be tested or replaced once every ten years.

(B) Additionally, computerized water billing reveals above normal water usage at individual connections, allowing staff to identify inaccurate or leaking meters. Meters identified in this manner are investigated, followed by testing, repairs, or replacement as needed. All zero consumption accounts are checked to determine if water is actually being consumed and not recorded.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.46 METER TESTING, REPAIR, AND REPLACEMENT.

(A) The city employs metering devices on all source water diversions. The meters are capable of measuring the amount of water diverted/pumped to within plus or minus 5%. In addition, the city currently meters all water supply connections, using meters that are capable of measuring accurately within plus or minus 5%. In addition, a regularly scheduled maintenance program of meter repair and replacement will be performed in accordance with the following schedule:

- (1) Production (master) meters will be tested annually;
- (2) Meters larger than one inch will be tested annually; and
- (3) Meters one inch or smaller will be tested or replaced once every ten years.

(B) Additionally, computerized water billing reveals above normal water usage at individual connections, allowing staff to identify inaccurate or leaking meters. Meters identified in this manner are investigated, followed by testing, repairs, or replacement as needed. All zero consumption accounts are checked to determine if water is actually being consumed and not recorded.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.47 LEAK DETECTION, REPAIR, AND MINIMIZATION OF CONVEYANCE LOSSES.

Stephenville operates and maintains the water transmission system within the city. In order to maintain water delivery service and to reduce and control unaccounted for water, Stephenville staff routinely visually inspect the transmission system to identify abnormal conditions indicating leaks. The staff is equipped to respond and repair equipment and pipeline breaks or employ contract assistance as required. As a result of these measures, unaccounted-for water is about 8.90%. The goal is to reduce unaccounted-for water to 15% or below. The TCEQ (formerly TNRCC) considers unaccounted-for water uses of 15% or less acceptable for communities serving more than 5,000 people.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.48 RATE STRUCTURE.

Stephenville has a non-promotional rate structure for water service. The city's current water rates should be verified through the most current fee schedule.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.49 LOW-FLOW PLUMBING FIXTURES.

(A) The use of water-efficient plumbing fixtures such as toilets, showerheads, and faucets in new construction, and in replacement of existing plumbing fixtures as maintenance and repair are required can also lower water consumption. Water-efficient plumbing fixtures are designed for low quantities of flow per unit of use. In 1991 the Texas Legislature passed Senate Bill 587 (Tex. Health & Safety Code, §§ 372.001 *et seq.*), establishing minimum standards for plumbing fixtures sold within Texas. The water-efficient "Plumbing Fixture Act" became effective on January 1, 1992 and allowed for wholesalers and retailers to clear existing inventories of pre-standards plumbing fixtures until January 1, 1993. The standards, as specified by Senate Bill 587, are shown in the table below.

Minimum Standards for Plumbing Fixtures

<i>Fixture</i>	<i>Standard</i>
Wall-mounted flushometer toilets	2.00 gallons per flush
All other toilets	1.60 gallons per flush
Shower heads	2.75 gallons per minute at 80 psi
Urinals	1.00 gallon per flush
Faucet aerators	2.20 gallons per minute at 80 psi
Drinking water fountains	Shall be self-closing

(B) The Texas Commission on Environmental Quality (TCEQ) has promulgated rules requiring the labeling of both plumbing fixtures and water-using appliances sold in Texas. The labels must specify the rates of flow for plumbing fixtures and lawn sprinklers, and the amounts of water use per cycle for clothes washers and dishwashers.

(C) The TWDB estimates that the installation of the new plumbing fixtures in dwellings, offices, and public spaces could reduce per capita water use by about 22 gallons per day. The estimated conservation effect is shown in the table below. The TWDB estimates that the installation of the low- flow plumbing fixtures in new construction and in replacement of fixtures in existing structures will phase in most of this conservation effect by the year 2020.

Estimated Water Savings Associated with New Plumbing Fixtures

<i>Fixture</i>	<i>Water Savings (gpcd)</i>
Low-flow toilets (1.6 gallons per flush)	14
Shower heads	5.5
Urinals	2.1
Faucet aerators	0.3
Drinking water fountains	0.1
Total	22

(D) In addition to the conservation potential of new plumbing fixtures, a degree of conservation can be accomplished by using more efficient water-using appliances (e.g., dishwashers and washing machines), modifying lawn and landscaping plans to use grasses and plants that require less water, improved leak detection, and educating the public on personal water conservation techniques. Stephenville will make related information available through its public information and education program.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

 **§ 51.50 WATER-CONSERVING LANDSCAPING.**

(A) Water-conserving landscaping is a development concept that encourages residents to adopt low- water-using landscaping principles and methods for use around the home. The same concepts can be applied to other landscaped areas as well, including parks and other public places.

(B) One popular method of reducing water use for landscape irrigation is to encourage residents to use xeriscaping techniques for landscaping. There are seven generally adopted principles when planning a xeriscaped yard:

(1) *Planning and design.* During this step an appropriate plan is developed considering such variables as climate, existing vegetation, intended use of the space, and topographic features.

(2) *Soil analysis.* Examine the soil types covering the whole site.

(3) *Appropriate plant selection.* Plants should be selected which are native to the area or are adaptive to the site.

(4) *Practical turf areas.* Plan where turf areas should be located and consider increasing the area of decks, porous paving, paths, and mulched planting beds to reduce turf.

(5) *Efficient irrigation.* Landscaped areas should only be watered as needed and then usually during the early morning or late evening to avoid water lost due to evaporation, keeping in mind some plant species may experience mold and/or fungus growth if watered at night.

(6) *Use of mulches.* A three- to four-inch layer of mulch should cover all exposed soil areas and be replenished twice a year.

(7) *Appropriate maintenance.* Keep the yard well maintained to reduce the use of fertilizer, chemicals, and water.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.51 ADDITIONAL CONSERVATION STRATEGIES.

The city will select any combination of the following strategies, in addition to those strategies listed above, if they are necessary to achieve the stated water conservation goals of this Water Conservation Plan. The TCEQ may also require that any of the following strategies be implemented by the city if the TCEQ determines that the strategy is necessary to achieve the goals of this Water Conservation Plan. The additional strategies that may be implemented are:

(A) Revision of water rates to promote increased water conservation;

(B) Additional programs to encourage the retrofit of water-conserving plumbing fixtures in existing structures;

(C) Wastewater reuse and/or recycling of wastewater and/or greywater;

(D) A program for pressure control and/or reduction in the distribution system and/or for customer connections;

(E) Any other conservation practice, method, or technique which the city shows to be appropriate to achieving the stated goal or goals of this Water Conservation Plan.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.52 WHOLESALE WATER CONTRACTS.

For every wholesale water contract entered into or renewed after official adoption of this Water Conservation Plan, including any contract extensions, the wholesale water customer must develop and implement a water conservation plan or water conservation measures according to TCEQ guidelines. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each

successive customer in the resale of the water will be required to implement water conservation measures in accordance with TCEQ guidelines.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.53 IMPLEMENTATION, ENFORCEMENT, COORDINATION WITH THE REGIONAL WATER PLANNING GROUP; UPDATING OF THE PLAN.

(A) The city Director of Public Works will act as the Administrator of the water conservation program. The Administrator will oversee the execution and implementation of all elements of the program. The Administrator is responsible for maintaining adequate records for program verification.

(B) The Stephenville City Council has approved, by resolution, the Water Conservation Plan. A copy of the resolution is included in Appendix B attached to the approving ordinance. Implementation of the plan, excluding the statute described in § [51.43](#), shall be on a voluntary basis, supported by the public information and education program.

(C) Stephenville is located within the Region G Regional Water Planning Area. In accordance with the TCEQ rules, Stephenville has provided a copy of this Water Conservation Plan to the Region G Regional Water Planning Group. A copy of the transmittal letter is included in Appendix C attached to the approving ordinance.

(D) The Administrator will monitor the progress of the Water Conservation Plan, using information from water utility records and staff. Additionally, the Administrator will be responsible for submission of an annual report to the TCEQ and TWDB on the progress, and any changes to, the Water Conservation Plan.

(Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

§ 51.99 PENALTY.

(A) Whoever violates any provision of this chapter for which another penalty is not specifically provided, shall be punished as set forth in § [10.99](#).

(B) (1) No person shall knowingly or intentionally allow the use of water from city for residential, commercial, industrial, agricultural, governmental or any other purpose in a manner contrary to any provision of §§ [51.10](#) through [51.19](#), or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by the Mayor, or his/her designee, in accordance with provisions of §§ [51.10](#) through [51.19](#).

(2) Any person who violates §§ [51.10](#) through [51.19](#) is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not less than \$10 and not more than \$500. Each day that one or more of the provisions is violated shall constitute a separate offense. If a person is convicted of three or more distinct violations of these sections, the Mayor shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of a reconnection charge and any other costs incurred by the city in discontinuing service. In addition, suitable assurance must be given to the city that the same action shall not be repeated while the Drought Contingency Plan is in effect. Compliance with this Plan may also be sought through injunctive relief in the district court.

(3) Any person, including a person classified as a water customer of the city, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation.

(Ord. 1999-8, passed 5-4-99; Am. Ord. 1999-19, passed 7-6-99; Ord. 2000-8, passed 4-18-2000; Ord. 2003-21, passed 8-26-03; Am. Ord. 2008-02, passed 2-5-08)

APPENDIX A: DISCUSSION OF WATER CONSERVATION GOALS

The technical potential for reducing per capita water use is the range in potential water savings that can be achieved by implementing specific water conservation measures. The bottom of the range represents the potential savings under an "advanced" conservation scenario. The conservation measures include:

Reducing unaccounted-for water uses;

Reducing indoor water use due to water-conserving plumbing fixtures;

Reducing seasonal water use; and

Reducing water use through public education programs.

Guidelines for calculating the technical potential water savings for each of these conservation measures are given below.

1. Reducing unaccounted-for water uses.

The TCEQ (formerly TNRCC) considers unaccounted-for water uses of 15% or less acceptable for communities serving more than 5,000 people. Smaller, older systems that have a larger service area may legitimately experience larger losses. Losses above 15% may be an area of concern, and provide a conservation potential.

2. Reducing indoor water use due to water-conserving plumbing fixtures.

The TCEQ uses 20.5 gpcpd as the most reliable figure upon which to base potential water savings, which represents the "most likely" conservation scenario. This figure is based upon the estimate that by 2050, 90% of pre-1990 homes, and all new homes will have been equipped with water conserving plumbing fixtures.

The figures used for the "advanced" conservation scenario, 21.7 gpcpd is an estimate of the average savings that would result from a home equipped exclusively with water conserving plumbing fixtures. This figure is considered "advanced" because in a typical city, 100% of the homes are not exclusively equipped with water-conserving fixtures.

3. Reducing seasonal water use.

The Texas Water Development Board (TWDB) has calculated seasonal use as a percentage of average annual per capita use for East Texas (20%), West Texas (25%), and state wide average of 22.5%. Seasonal water use is calculated by multiplying the average annual per capita use in gpcpd by the appropriate percentage.

The technical potential for reduction in seasonal use is then calculated by multiplying the seasonal use by 7% for the "most likely" conservation scenario, and by 20% for the "advanced" scenario.

4. Reducing water use through public education programs.

The technical potential for water conservation from public education programs is estimated to be from 2% of the average annual per capita use for the "most likely" conservation scenario to 5% for the "advanced" scenario, according to the "Water Conservation Handbook," published in 1993 by the American Water Works Association.

To calculate the total technical potential for reducing municipal per capita water use, add the individual technical potential amounts.

Summary of Technical Potential Calculations		
Conservation Measure	Calculation Procedure	Result (gpcd)
Reducing unaccounted-for uses	(Dry-year demand (104 gpcd)) x (Unaccounted-for percentage if more than 15%, minus 15%)	0 to 0.15
Reducing indoor water use due to water-efficient plumbing fixtures	20.5 gpcd ("rule of thumb") to 21.7 gpcd (advanced)	20.5 to 21.7
Reducing seasonal water use	Seasonal use (Avg. use (104 gpcd) x 22.5%) x 7% and 20%)	1.6 to 4.7
Reducing water use through public education programs	Average use (104 gpcd) x 2% and 5%	2.1 to 5.2
	Total Technical Potential Savings	24.2 to 31.8

To calculate the long-run planning goal, subtract these totals from the dry-year water demand. Estimation of the technical potential for reducing per capita water use (gpcd).

	<u>Conservation Scenario Most Likely</u>
Reduction in unaccounted-for uses:	<u>0.0 to 0.15</u>
Reduction in indoor water use due to water-conserving plumbing fixtures:	<u>20.5</u>
	<u>Conservation Scenario Most Likely</u>
Reduction in seasonal use:	<u>1.6 to 4.7</u>
Reduction in water use due to public education programs:	<u>2.1 to 5.2</u>
TOTAL TECHNICAL POTENTIAL FOR REDUCING PER CAPITA WATER USE:	<u>24.2 to 30.6</u>

* Subtract these totals from the dry-year per capita use to calculate the long-run planning goal.

Planning Goals

Municipal: The planning goal equals the dry-year Municipal per capita water use minus the total technical potentials calculated above.

Planning goal (in gpcd):	<u>102.4 to 100.9</u>
Goal to be achieved by year:	<u>2019 to 2024</u>

Needed reduction in per capita use to meet the 5-year planning goal

Current per capita use:	<u>104</u>
Planning goal:	<u>102.4</u>
Difference between current use and goal:	<u>1.6</u>

(Represents needed reduction in per capita use to meet goal)

Residential: The planning goals for Residential per capita water use are summarized below.

	Historic 5yr Average	Baseline	5-yr Goal for year 2019	10-yr Goal for year 2024
Total GPCD ¹	104	109	102.4	100.9
Residential GPCD ²	57	107	56.2	55.3
Water Loss (GPCD) ³	11	11	10.8	10.7
Water Loss (Percentage) ⁴	10	10	9.9	9.7

1. Total GPCD = (Total Gallons in System ÷ Permanent Population) ÷ 365
2. Residential GPCD = (Gallons Used for Residential Use ÷ Residential Population) ÷ 365
3. Water Loss GPCD = (Total Water Loss ÷ Permanent Population) ÷ 365
4. Water Loss Percentage = (Total Water Loss ÷ Total Gallons in System) x 100; or (Water Loss GPCD ÷ Total GPCD) x 100

(Ord. 2008-02, passed 2-5-08; Am. Ord. 2014-09, passed 4-1-14)

APPENDIX B: UTILITY PROFILE FOR RETAIL WATER SUPPLIER

CONTACT INFORMATION

Name of Utility: City of Stephenville

Public Water Supply Identification Number (PWS ID): 0720002

Certificate of Convenience and Necessity (CCN) Number: 10463

Surface Water Right ID Number: _____

Wastewater ID Number: 10290001

Completed By: Nick Williams, PE Title: Director of Public Works

Address: 298 W. Washington City: Stephenville Zip Code: 76401

Email: nwilliams@ci.stephenville.tx.us Telephone Number: (254) 918-1223

Date: 03/27/2014

Regional Water Planning Group: G [Map](#)

Groundwater Conservation District: MTCGD [Map](#)

Check all that apply:

Received financial assistance of \$500,000 or more from TWDB

Have 3,300 or more retail connections

Have a surface water right with TCEQ

Section I: Utility Data

A. Population and Service Area Data

1. Current service area size in square miles: 12
(Attach or email a copy of the service area map.)

2. Provide historical service area population for the previous five years, starting with the most current year.

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Service
2009	17,950	0	17,770
2010	18,150	0	17,970
2011	17,480	0	17,300
2012	18,290	0	18,110
2013	19,320	0	19,130

3. Provide the projected service area population for the following decades.

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Service
2020	22,020	0	22,800
2030	26,420	0	26,160
2040	31,700	0	31,380
2050	38,040	0	37,660
2060	45,650	0	45,190

4. Describe the source(s)/method(s) for estimating current and projected populations.

Current Population estimated by North Central Texas Council of Governments (NCTCOG) and the State Planning Department.

Projected Population Served By Retail Water Service estimated as 2% growth per year based upon reported estimates from 2003-2013.

Projected Population Served by Wastewater Service estimated as 99% of Projected Population Served by Retail Water Service.

B. System Input

Provide system input data for the previous five years.

Total System Input = Self-supplied + Imported – Exported

Year	Self-supplied Water in Gallons	Purchased/Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2009	739,091,000	6,527,000	0	74,561,8000	114
2010	679,009,000	1,5948,000	0	694,957,000	105
2011	857,660,000	35,430,000	0	893,090,000	140
2012	729,553,000	60,330,000	0	789,883,000	118
2013	702,653,000	66,859,000	0	769,512,000	109
Historic 5- year Average	741,593,200	37,018,800	0	778,612,000	117

C. Water Supply System (Attach description of water system)

1. Designed daily capacity of system 5,472,000 gallons per day.
2. Storage Capacity:
 Elevated 1,250,000 gallons
 Ground 4,750,000 gallons
3. List all current water supply sources in gallons.

Water Supply Source	Source Type*	Total Gallons
Trinity Aquifer	Ground	702,653,000
Upper Leon River MWD	Surface	66,859,000

*Select one of the following source types: *Surface water, Groundwater, or Contract*

4. If surface water is a source type, do you recycle backwash to the head of the plant?
 Yes 31,444 estimated gallons per day of recycled or reuse water
 No

D. Projected Demands

1. Estimate the water supply requirements for the next ten years using population trends, historical water use, economic growth, etc.

Year	Population	Water Demands (gallons)
2014	19,735	624,126,000
2015	20,159	634,846,000
2016	20,592	647,116,000
2017	21,034	656,997,000
2018	21,486	667,786,000
2019	21,948	678,844,000
2020	22,419	688,734,000
2021	22,901	700,922,000
2022	23,393	712,259,000
2023	23,896	723,366,000

2. Describe sources of data and how projected water demands were determined.

Population growth was estimated at 2.15% each year based upon reported population estimates from 2003-2013 in the Quantitative Financial Information and Utility Report / Nationally Recognized Municipal Securities Information Repository - NRMSIR.

Water Demand projection estimated at 1.58% average growth based upon average annual demand increase from 2003-2013 in the Quantitative Financial Information and Utility Report / Nationally Recognized Municipal Securities Information Repository - NRMSIR.

E. High Volume Customers

1. List the annual water use, in gallons, for the five highest volume **RETAIL customers**. Select one of the following water use categories to describe the customer; choose Residential, Industrial, Commercial, Institutional, or Agricultural.

Retail Customer	Water Use Category*	Annual Water Use	Treated or Raw
Tarleton State University	Institutional	46,347,000	Treated
Campus Crest	Commercial	11,257,000	Treated
Stephenville Laundry	Commercial	8,775,000	Treated
FMC Corporation	Industrial	6,960,000	Treated
Charter Properties Management	Commercial	6,858,000	Treated

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

2. If applicable, list the annual water use for the five highest volume **WHOLESALE customers**. Select one of the following water use categories to describe the customer; choose Municipal, Industrial, Commercial, Institutional, or Agricultural.

Wholesale Customer	Water Use Category*	Annual Water Use	Treated or Raw

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

F. Utility Data Comment Section

Provide additional comments about utility data below.

Section II: System Data

A. Retail Connections

1. List the active retail connections by major water use category.

Water Use Category*	Active Retail Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Residential – Single Family	4,896	0	4,896	84%
Residential – Multi-family (units)	143	0	143	2%
Industrial	11	0	11	0%
Commercial	759	0	759	13%
Institutional	0	0	0	0%
Agricultural	0	0	0	0%
TOTAL	5,809	0	5,809	

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

2. List the net number of new retail connections by water use category for the previous five years.

Water Use Category*	Net Number of New Retail Connections				
	2009	2010	2011	2012	2013
Residential – Single Family	94	27	38	26	53
Residential – Multi-family (units)	11	0	14	-10	12
Industrial	1	0	1	0	0
Commercial	14	0	2	11	11
Institutional	0	0	0	0	0
Agricultural	0	0	0	0	0
TOTAL	120	27	55	27	76

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

B. Accounting Data

For the previous five years, enter the number of gallons of RETAIL water provided in each major water use category.

Water Use Category*	Total Gallons of Retail Water				
	2009	2010	2011	2012	2013
Residential - Single Family	379,940,000	316,571,000	436,164,000	387,235,000	373,567,000
Residential – Multi-family	76,286,000	82,181,000	86,165,000	83,012,000	82,151,000
Industrial	9,124,000	9,187,000	12,559,000	15,856,000	15,302,000
Commercial	234,174,000	217,663,000	231,076,000	231,056,000	231,592,000
Institutional	0	0	0	0	0
Agricultural	0	0	0	0	0
TOTAL	699,524,000	625,60,2000	765,964,000	717,159,000	702,612,000

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

C. Residential Water Use

For the previous five years, enter the residential GPCD for single family and multi-family units.

Water Use Category*	Residential GPCD				
	2009	2010	2011	2012	2013
Residential - Single Family	94	81	105	93	86
Residential – Multi-family	47	45	51	47	44

D. Annual and Seasonal Water Use

- For the previous five years, enter the gallons of treated water provided to RETAIL customers.

Month	Total Gallons of Treated Retail Water				
	2009	2010	2011	2012	2013
January	49,535,000	50,667,000	46,267,000	50,561,000	50,616,000
February	47,600,000	48,099,000	42,690,000	52,216,000	46,561,000
March	49,942,000	54,105,000	48,737,000	64,520,000	50,859,000
April	52,942,000	56,976,000	53,818,000	69,977,000	64,122,000
May	58,650,000	57,615,000	61,117,000	69,657,000	74,444,000
June	80,015,000	75,329,000	77,884,000	105,007,000	72,330,000
July	93,774,000	83,035,000	68,243,000	120,351,000	83,770,000
August	80,011,000	80,111,000	82,191,000	102,179,000	87,507,000
September	74,365,000	64,314,000	67,155,000	88,469,000	77,196,000
October	68,545,000	52,563,000	60,514,000	69,869,000	67,232,000
November	57,074,000	49,344,000	55,433,000	59,738,000	62,808,000
December	49,748,000	44,948,000	54,206,000	52,871,000	54,558,000
TOTAL	762,201,000	717,106,000	718,255,000	905,415,000	792,003,000

2. For the previous five years, enter the gallons of raw water provided to RETAIL customers.

Month	Total Gallons of Raw Retail Water				
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
TOTAL					

3. Summary of seasonal and annual water use.

Water Use	Seasonal and Annual Water Use					Average in Gallons
	2009	2010	2011	2012	2013	
Summer Retail (Treated + Raw)	253,800,000	238,475,000	228,318,000	327,537,000	243,607,000	<u>258,347,400</u> 5yr Average
TOTAL Retail (Treated + Raw)	762,201,000	717,106,000	718,255,000	905,415,000	792,003,000	<u>778,996,000</u> 5yr Average

E. Water Loss

Provide Water Loss data for the previous five years.

Water Loss GPCD = [Total Water Loss in Gallons ÷ Permanent Population Served] ÷ 365

Water Loss Percentage = [Total Water Loss ÷ Total System Input] x 100

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss as a Percentage
2009	46,094,000	7	6%
2010	69,355,000	10	10%
2011	122,143,000	19	14%
2012	72,704,000	11	9%
2013	66,900,000	9	9%
5-year average	75,439,200	11	10%

Section III: Wastewater System Data

If you do not provide wastewater system services then you have completed the Utility Profile. Save and Print this form to submit with your Plan. Continue with the [Water Conservation Plan Checklist](#) to complete your Water Conservation Plan.

A. Wastewater System Data (Attach a description of your wastewater system.)

1. Design capacity of wastewater treatment plant(s): 3,000,000 gallons per day.
2. List the active wastewater connections by major water use category.

Water Use Category*	Active Wastewater Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal	4978	0	4978	88
Industrial	9	0	9	0
Commercial	651	0	651	12
Institutional	0	0	0	0
Agricultural	0	0	0	0
TOTAL	5638	0	5638	

2. What percent of water is serviced by the wastewater system? 99 %
3. For the previous five years, enter the number of gallons of wastewater that was treated by the utility.

Month	Total Gallons of Treated Wastewater				
	2009	2010	2011	2012	2013
January	44,721,000	41,287,000	53,562,000	43,876,000	58,422,000
February	45,361,000	38,941,000	67,074,000	44,007,000	57,268,000
March	54,788,000	44,781,000	69,254,000	42,443,000	67,989,000
April	56,413,000	43,819,000	55,929,000	41,880,000	49,494,000
May	56,920,000	44,310,000	46,782,000	44,235,000	43,263,000
June	43,365,000	42,079,000	43,126,000	34,076,000	41,645,000
July	42,417,000	43,294,000	50,046,000	39,189,000	41,193,000
August	42,018,000	46,073,000	46,359,000	43,710,000	45,591,000
September	44,624,000	55,436,000	54,868,000	42,308,000	45,780,000
October	45,012,000	63,039,000	45,042,000	47,703,000	47,580,000
November	41,533,000	52,425,000	42,842,000	42,112,000	42,359,000
December	40,431,000	50,495,000	42,513,000	47,539,000	41,641,000
TOTAL	557,603,000	565,979,000	617,397,000	513,078,000	582,225,000

4. Can treated wastewater be substituted for potable water?

Yes

No

B. Reuse Data

1. Provide data on the types of recycling and reuse activities implemented during the current reporting period.

Type of Reuse	Total Annual Volume (in gallons)
On-site irrigation	2,440,000
Plant wash down	3,781,000
Chlorination/de-chlorination	5,256,000
Industrial	0
Landscape irrigation (parks, golf courses)	0
Agricultural	0
Discharge to surface water	0
Evaporation pond	0
Other	0
TOTAL	11,477,000

C. Wastewater System Data Comment

Provide additional comments about wastewater system data below.

In addition to the utility profile, a water conservation plan for municipal use by a public water supplier must include, at minimum, additional information as required by Title 30, Texas Administrative Code, § 288.2. Note: If the water conservation plan does not provide information for each requirement, an explanation must be included as to why the requirement is not applicable.

Specific, Quantified 5 & 10-Year Targets

The water conservation plan must include specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in gallons per capita per day (see Appendix A). Note that the goals established by a public water supplier under this subparagraph are not enforceable.

Metering Devices

The water conservation plan must include a statement about the water supplier's metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply.

Universal Metering

The water conservation plan must include a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement.

Unaccounted-For Water Use

The water conservation plan must include measures to determine and control unaccounted-for uses of water (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.).

Continuing Public Education & Information

The water conservation plan must include a description of the program of continuing public education and information regarding water conservation by the water supplier.

Non-Promotional Water Rate Structure

The water supplier must have a water rate structure which is not “promotional,” i.e., a rate structure which is cost-based and which does not encourage the excessive use of water. This rate structure must be listed in the water conservation plan.

Reservoir Systems Operations Plan

The water conservation plan must include a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies.

Enforcement Procedure & Plan Adoption

The water conservation plan must include a means of implementation and enforcement which shall be evidenced by 1) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and 2) a description of the authority by which the water supplier will implement and enforce the conservation plan.

ORDINANCE NO. 2007-

AN ORDINANCE ADOPTING THE WATER CONSERVATION AND DROUGHT CONTINGENCY PLAN FOR THE CITY OF STEPHENVILLE, TEXAS, DEFINING THE UTILITY DESCRIPTION, SERVICE AREA DESCRIPTION, AND WATER USE INFORMATION; PROVIDING FOR A WATER CONSERVATION PLAN AND SETTING OUT WATER CONSERVATION GOALS AND METHODS; AND PROVIDING FOR A DROUGHT CONTINGENCY PLAN; AND FIXING PENALTIES FOR VIOLATION OF SUCH PLAN.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF STEPHENVILLE;

That the Water Conservation and Drought Contingency Plan for the City of Stephenville, Texas, is hereby adopted as follows:

Coordination with the Regional Water Planning Group(s)

The water conservation plan must include documentation of coordination with the regional water planning group(s) for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

Example statement to be included within the water conservation plan:

The service area of the_(name of water supplier) is located within the_(name of regional water planning area or areas) and_(name of water supplier) has provided a copy of this water conservation plan to the_(name of regional water planning group or groups).

"§ 51.12 COORDINATION WITH REGIONAL WATER PLANNING GROUPS.

The service area of the city is located within the Brazos Region G Planning Group, and the city has provided a copy of this Plan to the Brazos Region G Regional Planning Group.

(Ord. 1999-8, passed 5-4-99; Am. Ord. 1999-19, passed 7-6-99; Am. Ord. 2000-8, passed 4-18-2000; Am. Ord. 2003-21, passed 8-26-03)"

Additional Requirements:

(Required of suppliers serving a population of 5,000 or more or a projected population of 5,000 or more within ten years)

1. Program for Leak Detection, Repair, and Water Loss Accounting

The plan must include a description of the program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system in order to control unaccounted-for uses of water.

See Section 51.47 below:

§ 51.47 LEAK DETECTION, REPAIR, AND MINIMIZATION OF CONVEYANCE LOSSES.

Stephenville operates and maintains the water transmission system within the city. In order to maintain water delivery service and to reduce and control unaccounted-for water, Stephenville staff routinely visually inspect the transmission system to identify abnormal conditions indicating leaks. The staff is equipped to respond and repair equipment and pipeline breaks or employ contract assistance as required. As a result of these measures, unaccounted-for water is

about 8.90%. The goal is to reduce unaccounted-for water to 15% or below. The TCEQ (formerly TNRCC) considers unaccounted-for water uses of 15% or less acceptable for communities serving more than 5,000 people.

(Ord. 2003-21, passed 8-26-03)

Plan Review and Update

Beginning May 1, 2005, a public water supplier for municipal use shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The public water supplier for municipal use shall review and update the next revision of its water conservation plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. The revised plan must also include an implementation report.

Best Management Practices Guide

On November 2004, the Texas Water Development Board's (TWDB) Report 362 was completed by the Water Conservation Implementation Task Force. Report 362 is the Water Conservation Best Management Practices (BMP) Guide. The BMP Guide is a voluntary list of management practices that water users may implement in addition to the required components of Title 30, Texas Administrative Code, Chapter 288. The BMP Guide is available on the TWDB's website at the link below or by calling (512) 463-7847.

<http://www.twdb.state.tx.us/assistance/conservation/TaskForceDocs/WCITFBMPGuide.pdf>

(Ord. 2008-02, passed 2-5-08)

📖 APPENDIX B-1: DEFINITIONS OF COMMONLY USED TERMS

CONSERVATION. Those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses.

INDUSTRIAL USE. The use of water in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, commercial fish production, and the development of power by means other than hydroelectric, but does not include agricultural use.

IRRIGATION. The agricultural use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water through a municipal distribution system.

MUNICIPAL PER CAPITA WATER USE. The sum total of water diverted into a water supply system for residential, commercial, and public and institutional uses divided by actual population served.

MUNICIPAL USE. The use of potable water within or outside a municipality and its environs whether supplied by a person, privately owned utility, political subdivision, or other entity as well as the use of sewage effluent for certain purposes, including the use of treated water for domestic purposes, fighting fires, sprinkling streets, flushing sewers and drains, watering parks and parkways, and recreational purposes, including public and private swimming pools, the use of potable water in industrial and commercial enterprises supplied by a municipal distribution

system without special construction to meet its demands, and for the watering of lawns and family gardens.

MUNICIPAL USE IN GALLONS PER CAPITA PER DAY. The total average daily amount of water diverted or pumped for treatment for potable use by a public water supply system. The calculation is made by dividing the water diverted or pumped for treatment for potable use by population served. Indirect reuse volumes shall be credited against total diversion volumes for the purpose of calculating gallons per capita per day for targets and goals.

POLLUTION. The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

PUBLIC WATER SUPPLIER. An individual or entity that supplies water to the public for human consumption.

REGIONAL WATER PLANNING GROUP. A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, § 16.053.

RETAIL PUBLIC WATER SUPPLIER. An individual or entity that for compensation supplies water to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants when that water is not resold to or used by others.

REUSE. The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

WATER CONSERVATION PLAN. A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).

WATER LOSS. The difference between water diverted or treated and water delivered (sold). Water loss can result from:

- (1) Inaccurate or incomplete record keeping;
- (2) Meter error;
- (3) Un-metered uses such as firefighting, line flushing, and water for public buildings and water treatment plants;
- (4) Leaks; and
- (5) Water theft and unauthorized use.

WHOLESALE PUBLIC WATER SUPPLIER. An individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others, or an individual or entity that conveys water to another individual or entity, but does not own the right to the water which is conveyed, whether or not for a delivery fee.

(Ord. 2008-02, passed 2-5-08)